## Abstract of the Disclosure

Medical devices for removing gasses, such as gas bubbles and/or dissolved gasses, from a liquid to be delivered to a patient, and methods of use and making of such devices. In at least some embodiments, a gas permeable membrane material is used in the construction of the gas removal devices. In some embodiments, layers of gas permeable membrane material are used to construct a filter structure for removing gas from the liquid. In other embodiments, hollow tubes and/or fibers of the gas permeable membrane material are used to construct a filter structure for removing gas from the liquid. The gas removal devices may be used in any of a broad variety of liquid delivery systems and/or configurations.

CERTIFICATE UNDER 37 CFR 110: The undersigned hereby certifies that this paper or papers, as described hereinabove, are being deposited in the United States Postal Service Express Mail Post Office to Addressee having an Express Mail Mailing label number of:

EV 333854019 US

5

10

Assistant Commissioner for Patents
Washington, DC 20231
on this 10th day of 0ctober 20 03
Crompton, Seager & Tufte, LLC